### PostgreSQL Date Functions

PostgreSQL provides a comprehensive set of date functions to handle and manipulate dates and times. Here are the commonly used functions with examples:

#### ****1. CURRENT\_DATE****

Returns the current date.

sql

Copy code

SELECT CURRENT\_DATE;

-- Output: 2024-12-02

#### ****2. CURRENT\_TIME****

Returns the current time.

sql

Copy code

SELECT CURRENT\_TIME;

-- Output: 14:35:22.123456+00

#### ****3. CURRENT\_TIMESTAMP****

Returns the current date and time.

sql

Copy code

SELECT CURRENT\_TIMESTAMP;

-- Output: 2024-12-02 14:35:22.123456+00

#### ****4. NOW()****

An alias for CURRENT\_TIMESTAMP.

sql

Copy code

SELECT NOW();

-- Output: 2024-12-02 14:35:22.123456+00

#### ****5. AGE()****

Calculates the interval between two dates.

sql

Copy code

SELECT AGE('2024-12-02', '2000-01-01');

-- Output: 24 years 11 mons 1 day

#### ****6. EXTRACT()****

Extracts a specific part of a date/time.

sql

Copy code

SELECT EXTRACT(YEAR FROM CURRENT\_DATE);

-- Output: 2024

#### ****7. DATE\_PART()****

Similar to EXTRACT() but supports interval parts.

sql

Copy code

SELECT DATE\_PART('day', CURRENT\_DATE - '2024-01-01');

-- Output: 335

#### ****8. TO\_CHAR()****

Formats a date/time value into a string.

sql

Copy code

SELECT TO\_CHAR(CURRENT\_DATE, 'YYYY-MM-DD');

-- Output: 2024-12-02

#### ****9. TO\_DATE()****

Converts a string to a date.

sql

Copy code

SELECT TO\_DATE('2024-12-02', 'YYYY-MM-DD');

-- Output: 2024-12-02

#### ****10. INTERVAL****

Used to add/subtract specific time units.

sql

Copy code

SELECT CURRENT\_DATE + INTERVAL '1 month';

-- Output: 2025-01-02

#### ****11. DATE\_TRUNC()****

Truncates a date/time to a specified precision.

sql

Copy code

SELECT DATE\_TRUNC('month', CURRENT\_DATE);

-- Output: 2024-12-01 00:00:00+00

#### ****12. CLOCK\_TIMESTAMP()****

Returns the current date and time with more precision.

sql

Copy code

SELECT CLOCK\_TIMESTAMP();

-- Output: 2024-12-02 14:35:22.123456+00

#### ****13. TIMEOFDAY()****

Returns the current date and time as a string.

sql

Copy code

SELECT TIMEOFDAY();

-- Output: Mon Dec 02 14:35:22.123456 2024

#### ****14. JUSTIFY\_DAYS/INTERVAL****

Adjusts intervals for human-readable output.

sql

Copy code

SELECT JUSTIFY\_INTERVAL(INTERVAL '30 days');

-- Output: 1 mon

#### ****15. DATE Arithmetic****

Add or subtract intervals.

sql

Copy code

SELECT CURRENT\_DATE + INTERVAL '10 days';

-- Output: 2024-12-12

SELECT CURRENT\_DATE - INTERVAL '10 days';

-- Output: 2024-11-22

### Interview Questions on Date Functions

#### ****Beginner-Level****

* 1. **How do you fetch the current date in PostgreSQL?**
     + **Answer:**

sql

Copy code

SELECT CURRENT\_DATE;

* 1. **How do you extract the year from a date column?**
     + **Answer:**

sql

Copy code

SELECT EXTRACT(YEAR FROM column\_name) FROM table\_name;

#### ****Intermediate-Level****

* 1. **Write a query to calculate a person’s age based on their date of birth.**
     + **Answer:**

sql

Copy code

SELECT AGE(CURRENT\_DATE, date\_of\_birth) AS age FROM users;

* 1. **Format a date as "December 2nd, 2024".**
     + **Answer:**

sql

Copy code

SELECT TO\_CHAR(CURRENT\_DATE, 'FMMonth DDth, YYYY');

* 1. **Get all records from the last 7 days.**
     + **Answer:**

sql

Copy code

SELECT \* FROM table\_name WHERE date\_column > CURRENT\_DATE - INTERVAL '7 days';

#### ****Expert-Level****

* 1. **How would you calculate the difference in days between two date columns in a table?**
     + **Answer:**

sql

Copy code

SELECT (end\_date - start\_date) AS day\_difference FROM table\_name;

* 1. **How do you truncate a timestamp to the start of the hour?**
     + **Answer:**

sql

Copy code

SELECT DATE\_TRUNC('hour', CURRENT\_TIMESTAMP);

* 1. **Write a query to find the first day of the current year.**
     + **Answer:**

sql

Copy code

SELECT DATE\_TRUNC('year', CURRENT\_DATE) AS first\_day\_of\_year;

* 1. **How can you find all records where a date falls on a weekend?**
     + **Answer:**

sql

Copy code

SELECT \*

FROM table\_name

WHERE EXTRACT(DOW FROM date\_column) IN (0, 6); -- 0: Sunday, 6: Saturday

* 1. **Write a query to add 1 year and 10 days to the current date.**
     + **Answer:**

sql

Copy code

SELECT CURRENT\_DATE + INTERVAL '1 year 10 days';

Let me know if you want to dive deeper into any of these concepts!

##### You said:

what is TO\_CHAR full form say it crisply.

###### ChatGPT said:

The full form of TO\_CHAR is **"To Character"**, as it converts a date, time, or number into a formatted string representation.